ANSI/IES RP-37-22

Illuminating Engineering Society

RECOMMENDED PRACTICE: LIGHTING AIRPORT OUTDOOR ENVIRONMENTS

AN AMERICAN NATIONAL STANDARD

Approved American National Standard ANSI

www.ies.org

ANSI/IES RP-37-22

RECOMMENDED PRACTICE: LIGHTING AIRPORT OUTDOOR ENVIRONMENTS

AN AMERICAN NATIONAL STANDARD

Publication of this Recommended Practice
has been approved by IES.
Suggestions for revisions
should be directed to IES.

Prepared for IES by the
IES Aviation Lighting Committee

Approved by the IES Standards Committee, September 28, 2022, as a Transaction of the Illuminating Engineering Society.

Approved DATE, as an American National Standard.

Published by the Illuminating Engineering Society, 120 Wall Street, New York, New York 10005.

IES Standards are developed through committee consensus and produced by the IES Office in New York. Careful attention is given to style and accuracy. If any errors are noted in this document, please forward them to the Director of Standards, at standards@ies.org or the above address, for verification and correction. The IES welcomes and urges feedback and comments.

Printed in the United States of America.

ISBN 978-0-87995-449-9

DISCLAIMER

IES publications are developed through the consensus standards development process approved by the American National Standards Institute. This process brings together volunteers representing varied viewpoints and interests to achieve consensus on lighting recommendations. While the IES administers the process and establishes policies and procedures to promote fairness in the development of consensus, it makes no guaranty or warranty as to the accuracy or completeness of any information published herein.

The IES disclaims liability for any injury to persons or property or other damages of any nature whatsoever, whether special, indirect, consequential or compensatory, directly or indirectly resulting from the publication, use of, or reliance on this document.

In issuing and making this document available, the IES is not undertaking to render professional or other services for or on behalf of any person or entity. Nor is the IES undertaking to perform any duty owed by any person or entity to someone else. Anyone using this document should rely on his or her own independent judgment or, as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given circumstances.

The IES has no power, nor does it undertake, to police or enforce compliance with the contents of this document. Nor does the IES list, certify, test or inspect products, designs, or installations for compliance with this document. Any certification or statement of compliance with the requirements of this document shall not be attributable to the IES and is solely the responsibility of the certifier or maker of the statement.

AMERICAN NATIONAL STANDARD

Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria have been met by the standards developer.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution.

The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether that person has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards.

The American National Standards Institute does not develop standards and will in no circumstances give an interpretation to any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretations should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

CAUTION NOTICE: This American National Standard may be revised at any time. The procedures of the American National Standards Institute require that action be taken to reaffirm, revise, or withdraw this standard no later than five years from the date of approval. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

Prepared by the IES Aviation Lighting Committee.

CONTENTS

Preface

This preface is not part of ANSI/IES RP-37-22. It is provided for informational purposes only.

This Recommended Practice (RP) does not provide general lighting information that is included in other IES documents. If the reader does not already have this information, it may be obtained as needed from the following IES Standards:

The Lighting Science Series:

- *ANSI/IES LS-1-22, Lighting Science: Nomenclature and Definitions for Illuminating Engineering*
- *ANSI/IES LS-2-20, Lighting Science: Concepts and Language of Lighting*
- *ANSI/IES LS-3-20, Lighting Science: Physics and Optics of Radiant Power*
- *ANSI/IES LS-4-20, Lighting Science: Measurement of Light – The Science of Photometry*
- *ANSI/IES LS-5-21, Lighting Science: Color*
- *ANSI/IES LS-6-20, Lighting Science: Calculation of Light and Its Effects*
- *ANSI/IES LS-7-20, Lighting Science: Vision – Eye and Brain*
- *ANSI/IES LS-8-20: Lighting Science: Vision – Perceptions and Performance*

The Lighting Practice Series:

- *ANSI/IES LP-1-20, Lighting Practice: Designing Quality Lighting for People and Buildings*
- *ANSI/IES LP-2-20, Lighting Practice: Designing Quality Lighting for People in Outdoor Environments*
- *ANSI/IES LP-3-20, Lighting Practice: Designing and Specifying Daylighting for Buildings*
- *ANSI/IES LP-4-20, Lighting Practice: Electric Light Sources – Properties, Selection, and Specification*
- *ANSI/IES LP-6-20, Lighting Practice: Lighting Control Systems – Properties, Selection, and Specification*
- *ANSI/IES LP-7-20, Lighting Practice: The Lighting Design and Construction Process*
- *ANSI/IES LP-8-20, Lighting Practice: The Commissioning Process Applied to Lighting and Control Systems*
- *ANSI/IES LP-9-20, Lighting Practice: Upgrading Lighting Systems in Commercial and Industrial Facilities*
- *ANSI/IES LP-10-20, Lighting Practice: Sustainable Lighting – An Introduction to the Environmental Impacts of Lighting*
- *ANSI/IES LP-11-20, Lighting Practice: Environmental Considerations for Outdoor Lighting*
- *ANSI/IES LP-12-21, Lighting Practice: IoT Connected Lighting*
- *ANSI/IES LP-13-21, Lighting Practice: Introduction to Resilient Lighting Systems*
- *ANSI/IES LP-16-22, Lighting Practice: Documenting Control Intent Narratives and Sequences of Operations*

1.0 Introduction and Scope

1.1 Introduction

ANSI/IES RP-37-22, Recommended Practice: Outdoor Lighting for Airport Environments is a guide for the planning and design of lighting systems in the entire airport outdoor environment. It has been prepared as a guide for the application of fixed outdoor lighting in and around the airport environment with respect to the airport's special requirements. These requirements include (but are not limited to):

- Height restrictions (such as obstructions affecting navigable airspace) as defined by the governing civil aviation authorities
- The ability to distinguish color of light for visual cues
- Prevention of light trespass that may interfere with the vision of pilots or air traffic control tower (ATCT) personnel
- Air traffic controllers' ability to see approaching aircraft and aircraft performing ground operations within the "aircraft movement area" without glare or direct or indirect light trespass
- Pilots' ability to detect runway lighting without glare or direct or indirect light trespass

ANSI/IES RP-37-22 provides guidance for dealing with the preceding considerations, while being cognizant of the